

### Remarks

The Examiner objected to the abstract, the specification and the IDS and rejected all of the pending claims. Applicant addresses each of the objections and rejections below.

### OBJECTIONS

**ABSTRACT** (paragraph 1 of Office Action) - The Examiner objected to the abstract because the length was too long. The applicant has amended the abstract to be within the word limit. The objection should accordingly be withdrawn.

**SPECIFICATION** (paragraph 2 of the Office Action) - The Examiner objected to the incorporation by reference of essential material in the application. The Applicant has amended the specification to create a substitute specification that includes material that was incorporated by reference. The applicant submits the substitute specification along with a marked up copy of the original specification and a declaration stating that no new matter was added with this Amendment.

In addition the Examiner has requested copies of all the applications incorporated by reference. The applicant points out that several of these applications are now issued patents, and that several of the provisional patents are now expired. The table below summarizes the status of the applications incorporated by reference.

Application Number	Docket Number	Filing Date	Status	Patent Number	Issue Date
09/204,888	T702-00	12/3/98	Pending	N/A	N/A
09/205,653	T703-00	12/3/98	Issued	6,457,010	9/24/02
09/205,119	T704-00	12/3/98	Pending	N/A	N/A
09/268,519	T706-00	3/12/99	Issued	6,298,348	10/02/01
09/268,526	T707-00	3/12/99	Issued	6,216,129	4/10/01
09/268,520	T709-00	3/12/99	Issued	6,324,519	11/27/01
60/183,409	T714-00	2/18/00	Expired Provisional	N/A	N/A

60/190,341	T716-00	3/16/00	Expired Provisional	N/A	N/A
60/196,375	T714-01	4/12/00	Expired Provisional	N/A	N/A

These applications, or patents where applicable, have been included on an IDS that is being submitted herewith this Amendment. The objection should according be withdrawn.

PRIORITY (paragraph 3 of the Office Action) – Since the application is a Continuation in Part (CIP), the Examiner requested that the applicants identify the new matter. The Applicant discussed the new matter with the Examiner during the Interview on June 20, 2003.

IDS (paragraph 4 of the Office Action) - The Examiner objected to the number of prior art references submitted. The applicant discussed the IDS with the Examiner during the Interview on June 20, 2003.

## **REJECTIONS**

CLAIMS - Claims 30-75 were pending in the application. All of the pending claims were rejected to for various reasons that are described below. Claims 30-75 have been canceled without prejudice or disclaimer to the subject matter recited therein. Claims 76-121 have been added and are the currently pending claims. Claims 76, 86, 92, 110 and 115 are the independent claims.

The Examiner rejected claims 30-75 under 35 USC §101 because the claims do not recite a useful, concrete and tangible result (paragraphs 5 and 6 of the Office Action). The applicant respectfully submits that the currently pending claims (76-121) recite a useful, concrete and tangible result and that this rejection is not applicable to these claims. Accordingly, the rejection should be withdrawn.

The Examiner rejected claims 30-75 under 35 USC §112, first paragraph as containing subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention (paragraphs 7 and 8 of the Office Action). The applicant respectfully submits that the currently pending claims (76-121) contain subject matter enabled in the specification and that this rejection is not applicable to these claims. Accordingly, the rejection should be withdrawn.

The Examiner rejected claims 30-75 under 35 USC §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention (paragraphs 9 and 10 of the Office Action). The applicant respectfully submits that the currently pending claims (76-121) are definite and that this rejection is not applicable to these claims. Accordingly, the rejection should be withdrawn.

The Examiner rejected claims 73-75 under 35 USC §112, sixth paragraph, as not setting a limit on how broadly the Office may construe means-plus-function language under the rubric of

reasonable interpretation (paragraphs 11 and 12 of the Office Action). The applicant respectfully submits that this rejection is not applicable to the currently pending claims (76-121).

The Examiner rejected claims 30-75 under 35 USC §102(b) as being clearly anticipated by *Hoarty et al.* (US 5,319,455), *Graves et al.* (US 5,410,344), *Wilkins* (US 5,446,919), *Saxe* (5,636,346), *Heckerman et al.* (US 5,704,017) or *Dedrick* (US 5,724,521) and are rejected under 35 USC 102(e) as being clearly anticipated by *Hite et al.* (US 5,774,170), *Merriman et al.* (US 5,948,061), *Herz et al.* (US 6,020,833 or US 6,088,722), or *Lazarus et al.* (US 6,134,532) - (paragraphs 13 and 14 of the Office Action). The applicant respectfully submits that the currently pending claims (76-121) are patentable over the cited references. Accordingly, the rejection should be withdrawn.

The Examiner rejected claims 30-75 under 35 USC §102(b) based upon a public use or sale of the invention (paragraphs 15 and 16 of the Office Action). The Examiner refers to the Applicants website for support. The Applicant has reviewed their website and found no support for the Examiners rejection. Accordingly, the applicant requests that the Examiner specifically point out the source of the rejection. Furthermore, Applicant submits that there was no public use or sale of this invention prior to the filing of this application. The rejection should be withdrawn.

The Examiner rejected claims 30-75 under 35 USC §103 as being unpatentable over an obvious variation of examiner's personal experience of a subscriber profiling information integration including privacy protected targeted advertising using secure correlation offered by Juno Online Services (paragraphs 17-20 of the Office Action). The applicant respectfully submits that the currently pending claims (76-121) are patentable over the cited references. Accordingly, the rejection should be withdrawn.

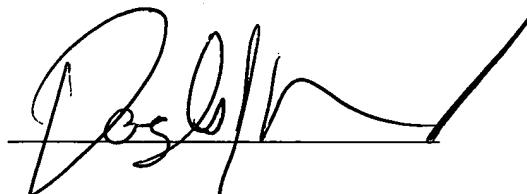
The Examiner rejected claims 30-75 under the judicially created doctrine of obviousness-type double patenting (paragraphs 21-23 of the Office Action). The applicant respectfully submits that this rejection is not applicable to the currently pending claims (76-121).

### **Conclusion**

For the foregoing reasons, Applicant respectfully submits that claims 76-121 are in condition for allowance. Accordingly, early allowance of claims 76-121 is earnestly solicited.

If the Examiner believes that a conference would be of value in expediting the prosecution of this Application, the Examiner is hereby invited to contact the undersigned attorney to set up such a conference.

Respectfully submitted,



Date: 7/25/03

Douglas J. Ryder, Esquire  
Reg. No. 43,073

6206 Kellers Church Road  
Pipersville, PA 18947  
Phone: (215) 766-2100  
Fax: (215) 766-2920  
[dryder@techpats.com](mailto:dryder@techpats.com)

## Claims

What is claimed:

- (30) A method for profiling a subscriber by integrating numerous distinct aspects of information about the subscriber,  
5 the method comprising:

collecting information about the subscriber from one or more sources; and

processing the information to generate a subscriber characterization vector.

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31. The method of claim 30, wherein said collecting includes collecting the information from one or more distributed databases.

15 32. The method of claim 31, wherein the information stored in the one or more distributed databases does not include raw transaction data.

20 33. The method of claim 31, wherein the information stored in the one or more distributed databases includes profile data.

34. The method of claim 33, wherein the profile data stored in one of the distributed databases is based on television

viewing data.

35. The method of claim 33, wherein the profile data stored  
in one of the distributed databases is based on Internet surfing  
5 data.

36. The method of claim 33, wherein the profile data stored  
in one of the distributed databases is based on purchase  
transaction data.

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37. The method of claim 30, wherein said processing  
includes processing the information to generate the subscriber  
characterization vector in the form of a ket vector.

15 38. The method of claim 37, wherein the ket vector is  
represented by:

$$|A\rangle = (a_1\rho_1 + a_2\rho_2 + \dots a_n\rho_n)$$

$$+ (b_1\sigma_1 + b_2\sigma_2 + \dots b_n\sigma_n)$$

+ . . .

20 + (m\_1\omega\_1 + m\_2\omega\_2 + \dots m\_n\omega\_n)

wherein  $a_1$  through  $m_n$  represent weighting factors and  $\rho_1$   
through  $\omega_n$  are identification factors selected from at least a

subset of demographic factors, socio-economic factors, housing factors, purchase factors, and consumption factors.

39. The method of claim 37, wherein said processing further  
5 includes normalizing the ket vector with a corresponding bra  
vector.

40. The method of claim 30, further comprising comparing an  
advertisement characterization vector representing an  
10 advertisement and the subscriber characterization vector to  
determine if the subscriber would likely be interested in the  
advertisement.

41. The method of claim 40, wherein said comparing is  
15 performed by applying an operator to the subscriber  
characterization vector.

42. The method of claim 40, wherein said comparing is  
performed by a secure correlation server.

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43. The method of claim 30, further comprising applying an  
operator to the subscriber characterization vector in order to  
group the subscriber with other subscribers based on similar  
traits.

44. The method of claim 43, wherein the similar traits include demographics.

5 45. The method of claim 43, wherein the similar traits include geographics.

10 46. The method of claim 43, wherein the similar traits include product interest.

15 47. A method for targeting advertisements in a privacy protected manner to one or more subscribers, the method comprising:

receiving an advertisement profile for a particular  
advertisement;

20 retrieving a subscriber profile for a particular subscriber;  
correlating the advertisement profile and the subscriber profile to determine if the advertisement is likely to be of interest to the subscriber.

25 48. The method of claim 47, wherein the particular advertisement is a group of advertisements having similar target markets.

49. The method of claim 47, wherein the particular subscriber is a group of subscribers.

50. The method of claim 49, wherein the group of 5 subscribers are grouped based on geographic or demographic similarities.

51. The method of claim 47, wherein said retrieving includes retrieving the subscriber profile in the form of a ket 10 vector.

52. The method of claim 51, wherein the ket vector is represented by:

$$|A\rangle = (a_1\rho_1 + a_2\rho_2 + \dots a_n\rho_n) \\ 15 + (b_1\sigma_1 + b_2\sigma_2 + \dots b_n\sigma_n) \\ + \dots \\ + (m_1\omega_1 + m_2\omega_2 + \dots m_n\omega_n)$$

wherein  $a_1$  through  $m_n$  represent weighting factors and  $\rho_1$  through  $\omega_n$  are identification factors selected from at least a 20 subset of demographic factors, socio-economic factors, housing factors, purchase factors, and consumption factors.

53. The method of claim 51, wherein said correlating includes applying an operator to the ket vector.

54. The method of claim 53, wherein the operator may be applied to ket vectors associated with single subscribers or a group of subscribers.

55. The method of claim 53, wherein the operator returns a measurable result that can be used to determine the interest of 10 the subscriber to the advertisement.

56. The method of claim 47, wherein said retrieving includes retrieving the subscriber profile from one or more distributed databases.

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57. A system for profiling a subscriber by integrating numerous distinct aspects of information about the subscriber, the system comprising:

one or more distributed databases storing information about 20 subscribers; and

a secure correlation server, coupled to the one or more distributed databases, for

retrieving the information from the one or more distributed databases, and

generating subscriber characterization vectors based on the retrieved information.

58. The system of claim 57, wherein the subscriber characterization vectors are generated in the form of one or more ket vectors.

59. The system of claim 58, wherein the ket vectors are in the form of :

$$\begin{aligned} 10 \quad |A\rangle &= (a_1\rho_1 + a_2\rho_2 + \dots a_n\rho_n) \\ &+ (b_1\sigma_1 + b_2\sigma_2 + \dots b_n\sigma_n) \\ &+ (c_1\tau_1 + c_2\tau_2 + \dots c_n\tau_n) \\ &+ (d_1v_1 + d_2v_2 + \dots d_nv_n) \\ &+ (e_1\omega_1 + e_2\omega_2 + \dots e_n\omega_n). \end{aligned}$$

15 60. The system of claim 59, wherein  $a_n\rho_n$  represent weighted demographic factors.

61. The system of claim 59, wherein  $b_n\sigma_n$  represents weighted socio-economic factors.

20 62. The system of claim 59, wherein  $c_n\tau_n$  represents weighted housing factors

63. The system of claim 59, wherein  $d_n v_n$  represents weighted purchase factors.

64. The system of claim 59, wherein  $e_n \omega_n$  represents weighted consumption factors.

65. The system of claim 59, wherein  $a_1$  through  $e_n$  represent weighting factors and  $p_1$  through  $\omega_n$  are identification factors selected from at least a subset of demographic factors, socio-economic factors, housing factors, purchase factors, and consumption factors

66. The system of claim 58, wherein said secure correlation server also applies one or more operators to the one or more key vectors to obtain an observable result.

67. The system of claim 66, wherein the observable result indicates whether the subscriber is likely to be interested in a particular advertisement.

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68. The system of claim 66, wherein the observable result indicates whether the subscriber has similar traits with a group of subscribers.

69. The system of claim 67, wherein the secure correlation server also provides the observable result to an advertisement management server for delivering applicable advertisements to appropriate subscribers.

5  
70. A system for delivering targeted advertisements to a subscriber, the system including:

10 a secure profiling system made up of one or more databases, wherein the one or more databases store profile information about the subscriber;

one or more advertisement sources for providing advertisements and advertisement characterization vectors defining a target audience of the advertisements;

15 a secure correlation server, coupled to the secure profiling system and the one or more advertisement sources, for

receiving an advertisement characterization vector from one of the one or more advertisement sources,

20 retrieving profile information from the secure profiling system,

generating subscriber characterization vectors based on the retrieved profile information,

correlating the subscriber characterization vectors and the subscriber characterization vector, and

selecting appropriate subscribers to receive the advertisement associated with the advertisement characterization vector; and

an access network for delivering the advertisement to the  
5 applicable subscribers.

71. The system of claim 70, wherein the subscriber characterization vectors are in the form of ket vectors.

10 72. The system of claim 71, wherein the secure correlation server performs the correlating by applying one or more operators to the ket vectors.

73. A secure correlation server for correlating  
15 advertisements to subscribers in a privacy protected manner, the secure correlation server including:

means for receiving advertisement characterization vectors;

means for retrieving subscriber characterization vectors from one or more distributed databases; and

20 means for correlating the advertisement characterization vectors and the subscriber characterization vectors.

74. The secure correlation server of claim 73, wherein said means for retrieving subscriber characterization vectors includes

means for generating ket vectors based on retrieved subscriber characterization vectors.

75. The secure correlation server of claim 74, wherein said  
5 means for correlating includes means for applying an operator to  
the ket vectors to determine the correlation between the  
advertisement characterization vectors and the subscriber  
characterization vectors.